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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,936	01/09/2002	Lars Langemyr	CMM-00202	4595

7590 05/03/2006

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EXAMINER

SHARON, AYAL I

ART UNIT	PAPER NUMBER
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2123

DATE MAILED: 05/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,936

Applicant(s)

LANGEMYR ET AL.

Examiner

Ayal I. Sharon

Art Unit

2123

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-78 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-78 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 08 April 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/10/06.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Introduction

1. Claims 1-78 of U.S. Application 10/042,936 filed on 01/09/2002 are currently pending.
2. The Application is a CIP of U.S. Application 09/995,222, filed on 11/27/2001, which claims benefit to U.S. Application 60/253,154. The Application is also a CIP of U.S. Application 09/675,778, filed on 9/29/2000, which claims benefit to U.S. Application 60/222,394.

Information Disclosure Statement

3. This application is a CIP of co-pending U.S. Application 09/995,222. Examiner notes that the two Information Disclosure Statements submitted in this application were not submitted in the co-pending parent case. Examiner believes that these Information Disclosure Statements are relevant to the parent case and should be submitted in the parent case.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. An invention which is eligible for patenting under 35 U.S.C. § 101 is in the “useful arts” when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. *The fundamental test for patent eligibility is thus to determine whether the claimed invention produces a “**useful, concrete and tangible result.**”* The test for practical application as applied by the examiner involves the determination of the following factors:

(1) “Useful” - The Supreme Court in *Diamond v. Diehr*, 450 U.S. 175, 209 USPQ 1 (1981) requires that the examiner look at the claimed invention as a whole and compare any asserted utility with the claimed invention to determine whether the asserted utility is accomplished. Applying utility case law the examiner will note that:

(a) the utility need not be expressly recited in the claims, rather it may be inferred.

(b) if the utility is not asserted in the written description, then it must be well established.

(2) “Tangible” - Applying *In re Warmerdam*, 33 F.3d 1354, 31 USPQ2d 1754 (Fed. Cir. 1994), the examiner will determine whether there is simply a mathematical construct claimed, such as a disembodied data structure and method of making it. If so, the claim involves no more than a manipulation of an abstract idea and therefore, is nonstatutory under 35 U.S.C. § 101. In *Warmerdam* the abstract idea of a data structure became capable of producing a

useful result when it was fixed in a tangible medium that enabled its functionality to be realized.

(3) "Concrete" - Another consideration is whether the invention produces a "concrete" result. Usually, this question arises when a result cannot be assured. An appropriate rejection under 35 U.S.C. § 101 should be accompanied by a lack of enablement rejection, because the invention cannot operate as intended without undue experimentation.

6. **Claims 1-78 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.** The Examiner respectfully submits that the rejected claims do not recite a useful result. The claims are not tangible because the cited claims do not clearly define what is the utility of the output of the invention (the "result").
7. **Claims 1-11,16-32, 40-50 and 55-71 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.** The Examiner respectfully submits that the rejected claims do not recite a concrete result. The claims are not concrete because the cited claims do not clearly define the output of the invention (the "result").
8. **In addition, Claims 72-78 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.** Independent claims 72-78 lack a positive recitation that what is claimed is a computer readable medium having executable computer code that when executed causes a computer to perform the steps described by the claim limitations. As currently

written, the claimed computer program and storage medium appears to consist of functional descriptive material; see MPEP Section 2106, subsection IV.B.1(a).

Response to Amendment

Re: Double Patenting

9. Applicants filed a terminal disclaimer to co-pending application 09/995,222 on 2/10/06. The obviousness-type double patenting rejections have therefore been withdrawn.

Claim Rejections - 35 USC § 101

10. The 35 USC § 101 rejections based on "computer program product" limitations have been withdrawn, because the limitations have been replaced with "computer readable medium" (see amendment dated 2/10/06).
11. The 35 USC § 101 rejections based on functional descriptive material have been withdrawn for claims 40-71, in light of the amendments to claim 40 (see amendment dated 2/10/06). However, these limitations were not amended into claim 72, so the rejections to claims 72-78 still stand.
12. Examiner finds that 1-80 are still rejected under 35 USC § 101. The following paragraphs further explain the grounds of the rejection.
13. An invention which is eligible for patenting under 35 U.S.C. § 101 is in the "useful arts" when it is a machine, manufacture, process or composition of matter, which produces a concrete, tangible, and useful result. The claims in the instant

application, on the other hand, are directed to an abstract idea - a mathematical algorithm, and the instant claims also lack a concrete, useful, and tangible result.

14. One may not patent every "substantial practical application" of an idea, law of nature or natural phenomena because such a patent "in practical effect be a patent on the [idea, law of nature or natural phenomena] itself." Gottschalk v. Benson, 409 U.S. 63, 71-72, 175 USPQ 673, 676 (1972).
15. Moreover, whether a claim recites a machine implemented process is not determinative of whether that process claim is statutory. Thus, a claim that is nothing more than a machine-implemented abstract idea is not statutory. See Benson, 409 U.S. 63, 175 USPQ 673 (finding machine-implemented method of converting binary-coded decimal numbers into pure binary numbers unpatentable).
16. The fundamental test for patent eligibility is to determine whether the claimed invention produces a **"useful, concrete and tangible result."** See State Street Bank & Trust Co. v. Signature Financial Group Inc., 149 F. 3d 1368, 47 USPQ2d 1596 (Fed. Cir. 1998) and AT&T Corp. v. Excel Communications, Inc., 172 F.3d 1352, 50 USPQ2d 1447 (Fed. Cir. 1999). In these decisions, the court found that the claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result."
17. See State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. ("[T]he transformation of data, representing discrete dollar amounts, by a machine through a series of mathematical calculations into a final share price, constitutes

a practical application of a mathematical algorithm, formula, or calculation, because it produces 'a useful, concrete and tangible result' – a final share price momentarily fixed for recording and reporting purposes and even accepted and relied upon by regulatory authorities and in subsequent trades”).

18. See also AT&T, 172 F.3d at 1358, 50 USPQ2d at 1452 (Claims drawn to a long-distance telephone billing process containing mathematical algorithms were held patentable subject matter because the process used the algorithm to produce a useful, concrete, tangible result without preempting other uses of the mathematical principle).

19. The claims in the instant application lack useful, concrete, tangible results.

Claim Rejections - 35 USC § 112

20. The 35 USC § 112, second paragraph rejections based on “computer program product” limitations have been withdrawn, because the limitations have been replaced with “computer readable medium” (see amendment dated 2/10/06).

21. The 35 USC § 112, first paragraph rejections have been withdrawn, because the issues are more appropriately addressed by the 35 USC § 101 rejections.

Claim Rejections - 35 USC § 103

22. The 35 USC § 103 rejections have been withdrawn. Examiner finds Applicants' arguments in pp.16-17 of the amendment filed 2/10/06 to be convincing.

Art Unit: 2123

Correspondence Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ayal I. Sharon whose telephone number is (571) 272-3714. The examiner can normally be reached on Monday through Thursday, and the first Friday of a biweek, 8:30 am – 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Rodriguez can be reached at (571) 272-3753.

Any response to this office action should be faxed to (571) 273- 8300, or mailed to:


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P.O. Box 1450
Alexandria, VA 22313-1450

or hand carried to:

USPTO
Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Tech Center 2100 Receptionist, whose telephone number is (571) 272-2100.

Ayal I. Sharon
Art Unit 2123
April 26, 2006


Paul L. Rodriguez 4/26/06
Primary Examiner
Art Unit 21252123